

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

ARAVIND PADMANABHAN, ET AL.

Docket: H0002237

Serial Number: 10/068,273

Group Art Unit: 1771

Filed: February 7, 2002

Examiner: Hai Vo

For: LIGHT EMITTING PHOTONIC CRYSTALS

DECLARATION UNDER 37 C.F.R. 1.132

I, Ray H. Baughman, declare as follows:

I was awarded the degree of Bachelor of Science in Physics by Carnegie-Mellon University in 1964.

I was awarded the degree of Master of Science in the Materials Science area by Harvard University in 1966.

I was awarded the degree of Ph.D. in the Materials Science area by Harvard University in 1971.

From 1970 to 2001 I was employed by Honeywell International Inc. (formerly known as AlliedSignal Inc. and AlliedChemical Inc.) as a Staff Scientist (1970-73), Group Leader (1974-78), Manager (1978-90) and as a Corporate Fellow (1990-2001).

From 2001 to the present I have been employed by the University of Texas at Dallas as the Robert A. Welch Professor of Chemistry and as Director of the NanoTech Institute.

I am a co-inventor of the subject matter claimed in the above identified patent application.

I am aware of the office action mailed November 10, 2003 in this application.

I have reviewed the cited reference, U.S. patent 6,261,469 to Zakhidov, et al., including the disclosure at column 4, lines 52-57. I am also a co-inventor of this referenced U.S. patent 6,261,469. My prior referenced U.S. patent 6,261,469 states that a three-dimensionally periodic material is provided that comprises carbon, whose surfaces or interfaces are inverse replicas of the surfaces of a sphere array, wherein the sphere diameter is from about 20 to about 100  $\mu\text{m}$ , and the carbon is a foam having an average pore diameter of from about 4  $\text{\AA}$  to about 10  $\text{\AA}$ .

The disclosed material described at this portion of my prior patent would not produce a light emitting or light transmitting photonic crystal and therefore would not anticipate or obviate the claims of the present application. Specifically, the disclosure of U.S. patent 6,261,469 at column 4, lines 52-57 would not produce a light emitting or light transmitting photonic crystal which comprises a two dimensionally periodic or three dimensionally periodic microporous structural matrix of interconnecting, crystallographically oriented, monodispersed members having voids between adjacent members, and said members additionally having randomly nanoporous surface porosity.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made upon information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under

Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Jan 9, 2004

Date

Dr. Ray Baughman  
Dr. Ray Baughman